

Serial Number: 09/901,556C

ENTERED

- ☐ Changed a file from non-ASCII to ASCII
- ☒ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☐ Other: _____



1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/901,556C

DATE: 07/30/2003

TIME: 19:08:39

Input Set : A:\PTO.AMC.txt

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3 <110> APPLICANT: Hotten, Gertrud
4   Neidhardt, Helge
5   Bechtold, Rolf
6   Pohl, Jens
8 <120> TITLE OF INVENTION: GROWTH/DIFFERENTIATION FACTORS OF THE TGF-B FAMILY
10 <130> FILE REFERENCE: 2923-0286
12 <140> CURRENT APPLICATION NUMBER: 09/901,556C
14 <141> CURRENT FILING DATE: 1999-09-24
16 <150> PRIOR APPLICATION NUMBER: 08/289,222
18 <151> PRIOR FILING DATE: 1994-08-12
20 <150> PRIOR APPLICATION NUMBER: DE P 44 23 190.3
22 <151> PRIOR FILING DATE: 1994-07-01
24 <150> PRIOR APPLICATION NUMBER: EPO 92102324.8
26 <151> PRIOR FILING DATE: 1992-02-12
28 <150> PRIOR APPLICATION NUMBER: PCT/EP93/00350
30 <151> PRIOR FILING DATE: 1993-02-12
32 <160> NUMBER OF SEQ ID NOS: 53
34 <170> SOFTWARE: PatentIn version 3.1
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40 <212> TYPE: DNA
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51 gccgtttcgc ccacccccca tcacaccccc cgagtacatg ctctcgctgt acaggacgct      240
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81 cacaccaccc acctgctgtg tgcccacgcg gctgagtcct atcagcatcc tcttcattga      1140
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101 cccagcaatg acctcctcat tgcttctggc ctttctcctc ctggctccaa ccacagtggc 180
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163 acattctgat tttttttttt tttttttttt tgaaaagtta aaaattcctt aattttttat 2040
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176 <211> LENGTH: 401
178 <212> TYPE: PRT
180 <213> ORGANISM: Homo sapiens
182 <400> SEQUENCE: 3

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189 20 25 30
192 Ala Pro Pro Lys Ala Gly Ser Val Pro Ser Ser Phe Leu Leu Lys Lys
193 35 40 45
196 Ala Arg Glu Pro Gly Pro Pro Arg Glu Pro Lys Glu Pro Phe Arg Pro
197 50 55 60
200 Pro Pro Ile Thr Pro His Glu Tyr Met Leu Ser Leu Tyr Arg Thr Leu
201 65 70 75 80
204 Ser Asp Ala Asp Arg Lys Gly Gly Asn Ser Ser Val Lys Leu Glu Ala
205 85 90 95
208 Gly Leu Ala Asn Thr Ile Thr Ser Phe Ile Asp Lys Gly Gln Asp Asp
209 100 105 110
212 Arg Gly Pro Val Val Arg Lys Gln Arg Tyr Val Phe Asp Ile Ser Ala
213 115 120 125
216 Leu Glu Lys Asp Gly Leu Leu Gly Ala Glu Leu Arg Ile Leu Arg Lys
217 130 135 140
220 Lys Pro Ser Asp Thr Ala Lys Pro Ala Ala Pro Gly Gly Gly Arg Ala
221 145 150 155 160
224 Ala Gln Leu Lys Leu Ser Ser Cys Pro Ser Gly Arg Gln Pro Ala Ser
225 165 170 175
228 Leu Leu Asp Val Arg Ser Val Pro Gly Leu Asp Gly Ser Gly Trp Glu
229 180 185 190
232 Val Phe Asp Ile Trp Lys Leu Phe Arg Asn Phe Lys Asn Ser Ala Gln
233 195 200 205
236 Leu Cys Leu Glu Leu Glu Ala Trp Glu Arg Gly Arg Ala Val Asp Leu
237 210 215 220
240 Arg Gly Leu Gly Phe Asp Arg Ala Ala Arg Gln Val His Glu Lys Ala
241 225 230 235 240
244 Leu Phe Leu Val Phe Gly Arg Thr Lys Lys Arg Asp Leu Phe Phe Asn
245 245 250 255
248 Glu Ile Lys Ala Arg Ser Gly Gln Asp Asp Lys Thr Val Tyr Glu Tyr
249 260 265 270
252 Leu Phe Ser Gln Arg Arg Lys Arg Arg Ala Pro Leu Ala Thr Arg Gln
253 275 280 285
256 Gly Lys Arg Pro Ser Lys Asn Leu Lys Ala Arg Cys Ser Arg Lys Ala
257 290 295 300
260 Leu His Val Asn Phe Lys Asp Met Gly Trp Asp Asp Trp Ile Ile Ala
261 305 310 315 320
264 Pro Leu Glu Tyr Glu Ala Phe His Cys Glu Gly Leu Cys Glu Phe Pro
265 325 330 335
268 Leu Arg Ser His Leu Glu Pro Thr Asn His Ala Val Ile Gln Thr Leu
269 340 345 350
272 Met Asn Ser Met Asp Pro Glu Ser Thr Pro Pro Thr Cys Cys Val Pro
273 355 360 365
276 Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe Ile Asp Ser Ala Asn Asn
277 370 375 380
280 Val Val Tyr Lys Gln Tyr Glu Asp Met Val Val Glu Ser Cys Gly Cys

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281 385          390          395          400
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290 <211> LENGTH: 352
292 <212> TYPE: PRT
294 <213> ORGANISM: Homo sapiens
296 <400> SEQUENCE: 4
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299 1          5          10          15
302 Val Ala Thr Pro Arg Ala Gly Gly Gln Cys Pro Ala Cys Gly Gly Pro
303          20          25          30
306 Thr Leu Glu Leu Glu Ser Gln Arg Glu Leu Leu Leu Asp Leu Ala Lys
307          35          40          45
310 Arg Ser Ile Leu Asp Lys Leu His Leu Thr Gln Arg Pro Thr Leu Asn
311          50          55          60
314 Arg Pro Val Ser Arg Ala Ala Leu Arg Thr Ala Leu Gln His Leu His
315 65          70          75          80
318 Gly Val Pro Gln Gly Ala Leu Leu Glu Asp Asn Arg Glu Gln Glu Cys
319          85          90          95
322 Glu Ile Ile Ser Phe Ala Glu Thr Gly Leu Ser Thr Ile Asn Gln Thr
323          100         105         110
326 Arg Leu Asp Phe His Phe Ser Ser Asp Arg Thr Ala Gly Asp Arg Glu
327          115         120         125
330 Val Gln Gln Ala Ser Leu Met Phe Phe Val Gln Leu Pro Ser Asn Thr
331          130         135         140
334 Thr Trp Thr Leu Lys Val Arg Val Leu Val Leu Gly Pro His Asn Thr
335 145         150         155         160
338 Asn Leu Thr Leu Ala Thr Gln Tyr Leu Leu Glu Val Asp Ala Ser Gly
339          165         170         175
342 Trp His Gln Leu Pro Leu Gly Pro Glu Ala Gln Ala Ala Cys Ser Gln
343          180         185         190
346 Gly His Leu Thr Leu Glu Leu Val Leu Glu Gly Gln Val Ala Gln Ser
347          195         200         205
350 Ser Val Ile Leu Gly Gly Ala Ala His Arg Pro Phe Val Ala Ala Arg
351          210         215         220
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355 225         230         235         240
358 Gln Gly Gly Ser Arg Met Cys Cys Arg Gln Glu Phe Phe Val Asp Phe
359          245         250         255
362 Arg Glu Ile Gly Trp His Asp Trp Ile Ile Gln Pro Glu Gly Tyr Ala
363          260         265         270
366 Met Asn Phe Cys Ile Gly Gln Cys Pro Leu His Ile Ala Gly Met Pro
367          275         280         285
370 Gly Ile Ala Ala Ser Phe His Thr Ala Val Leu Asn Leu Leu Lys Ala
371          290         295         300
374 Asn Thr Ala Ala Gly Thr Thr Gly Gly Gly Ser Cys Cys Val Pro Thr
375 305         310         315         320
378 Ala Arg Arg Pro Leu Ser Leu Leu Tyr Tyr Asp Arg Asp Ser Asn Ile
379          325         330         335

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392 <213> ORGANISM: Homo sapiens
394 <400> SEQUENCE: 5
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397 aggcattgcct ggtattgctg cctcctttca cactgcagtg ctcaatcttc tcaaggccaa      120
399 cacagctgca ggcaccactg gagggggctc atgctgtgta cccacggccc ggcgcccct      180
401 gtctctgctc tattatgaca gggacagcaa cattgtcaag actgacatac ctgacatggt      240
403 agtagaggcc tgtgggtgca gttag      265
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410 <212> TYPE: DNA
412 <213> ORGANISM: Homo sapiens
414 <400> SEQUENCE: 6
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419 cgagtccaca ccacccacc      139
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424 <211> LENGTH: 27
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428 <213> ORGANISM: Homo sapiens
430 <400> SEQUENCE: 7
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462 <211> LENGTH: 10
464 <212> TYPE: PRT
466 <213> ORGANISM: Homo sapiens
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471 1          5          10
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476 <211> LENGTH: 44
478 <212> TYPE: DNA

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VERIFICATION SUMMARY

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